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JULY 10, 2002

PTAS

TOWNSEND AND TOWNSEND AND CREW LLP
J. MATTHEW ZIGMANT
TWO EMBARCADERO CENTER, 8TH FLOOR
SAN FRANCISCO, CA 94111-3834

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UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 07/10/2002

REEL/FRAME: 012866/0905
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

CAO, JUN

DOC DATE: 09/18/2001

ASSIGNEE:

BROADCOM CORPORATION
16215 ALTON PARKWAY
IRVINE, CALIFORNIA 92619


SERIAL NUMBER: 09955693
PATENT NUMBER:

FILING DATE: 09/18/2001
ISSUE DATE:

LAZENA MARTIN, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

07/10/2002
700014732

Attorney Docket No. 019717-002700US

Form PTO-1595 (Rev. 03-01) OMB No. 0651-0027 (exp. 6/31/2002)		Recordation Form Cover Sheet PATENTS ONLY		U.S. Department of Commerce U.S. Patent and Trademark Office	
Tab settings → → → ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼					
To the Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof					
1. Name of conveying party(ies): Jun Cao		2. Name and address of receiving party(ies) Name: <u>Broadcom Corporation</u> Internal Address: _____ Street Address: <u>16215 Alton Parkway</u> City: <u>Irving</u> State: <u>CA</u> ZIP: <u>92619</u> Additional names and addresses attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
3. Nature of conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other: _____		Execution Date: <u>September 18, 2001</u>			
4. Application number(s) or patent number(s). If this document is being filed together with a new application, the execution date of the application is: _____ A. Patent Application No(s): <u>08/665,693</u> B. Patent No(s): _____ Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
5. Name and address of party to whom correspondence concerning document should be mailed: Name: <u>J. Matthew Zigmant</u> <u>TOWNSEND AND TOWNSEND AND CREW LLP</u> <u>Two Embarcadero Center, 8th Floor</u> <u>San Francisco, California 94111-3834</u> <u>(415) 578-0200</u>		6. Total number of applications and patents involved <u>1</u> 7. Total fee (37 CFR 3.41): <u>\$40.00</u> <input type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Authorized to be charged to deposit account 8. Deposit account number: <u>20-1430</u> (Attach duplicate copy of this page if paying by deposit account)			
DO NOT USE THIS SPACE					
B. Statement and signature. <i>To the best of my knowledge and belief, the foregoing is true and correct and any attached copy is a true of copy of the original document.</i>					
<u>J. Matthew Zigmant</u> Name of Person Signing Atty. Reg. No. 44,005		 Signature		<u>July 9, 2002</u> Date	
Total number of pages including cover sheet, attachments and document <u>2</u>					

Mail documents to be recorded with required cover to:
Commissioner of Patents and Trademarks, Box Assignments
Washington, D.C. 20231

Attorney Docket No.: 019717-002700US
Client Reference No.: BP1884

ASSIGNMENT OF PATENT APPLICATION**SOLE**

WHEREAS, Jun Cao, of 30 Straw Flower, Irvine, CA 92620; hereinafter referred to as "Assignor," is the inventor of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: **LINEAR PHASE DETECTOR FOR HIGH-SPEED CLOCK
AND DATA RECOVERY**

Date of execution of Declaration: September 18, 2001

Filing Date: September 18, 2001

Application No.: 09/955,693

WHEREAS, Broadcom Corporation, a corporation of the state of California, located at 16215 Alton Parkway, Irvine, CA, 92619-3616, hereinafter referred to as "ASSIGNEE," is desirous of acquiring an interest in the invention and application and in any U.S. Letters Patent and Registrations which may be granted on the same;

For good and valuable consideration, receipt of which is hereby acknowledged by Assignor, Assignor has assigned, and by these presents does assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on any patent application claiming priority from the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignor had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignor further agrees that Assignor will, without charge to Assignee, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including applications and instruments of transfer, and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

Assignor hereby authorizes and requests Townsend and Townsend and Crew LLP, Two Embarcadero Center, 8th Floor, San Francisco, CA 94111-3834, to insert herein above the application number and filing date of said application when known.

IN TESTIMONY WHEREOF, Assignor has signed his/her name on the date indicated.

Dated: 09/18/01


Jun Cao

PA 316906 v1



CRW
019717-002600US

MARCH 16, 2002

PTAS
TOWNSEND AND TOWNSEND AND CREW LLP
CHAD R. WALSH
TWO EMBARCADERO CENTER, 8TH FLOOR
SAN FRANCISCO, CALIFORNIA 94111-3834

Chief Information Officer
Washington, DC 20231
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RECORDATION DATE: 01/15/2002

REEL/FRAME: 012484/0465
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
ZHANG, BO

DOC DATE: 10/01/2001

ASSIGNEE:
BROADCOM CORPORATION
16215 ALTON PARKWAY
IRVINE, CALIFORNIA 92619

SERIAL NUMBER: 09910436
PATENT NUMBER:

FILING DATE: 07/19/2001
ISSUE DATE:

SEDLEY PYNE, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

Form PTO-1595

(Rev. 03-01)

OMB No. 0651-0027 (exp. 5/31/2002)

Tab settings ⇌ ⇌ ⇌

01-24-2002



set

U.S. Department of Commerce
U.S. Patent and Trademark Office

To the Honorable Commissioner

1. Name of conveying party(ies):

Bo Zhang

Additional name(s) of conveying parties attached? ☐ Yes ☒ No.

3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other: _____

Execution Date: October 1, 2001

101958026

attached original documents or copy thereof
address of receiving party(ies)Name: Broadcom CorporationInternal Address: N/AStreet Address: 16215 Alton ParkwayCity: Irvine State: CA ZIP: 92619Additional names and addresses attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s).

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No(s): 09/910,436

B. Patent No(s): _____

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Chad R. Walsh
TOWNSEND AND TOWNSEND AND CREW LLP
Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834
(650) 326-24006. Total number of applications and patents involved 17. Total fee (37 CFR 3.41): \$40.00☐ Enclosed☒ Authorized to be charged to deposit account8. Deposit account number: 20-1430

(Attach duplicate copy of this page if paying by deposit account)

01/24/2002 AAHMED1 00000018 201430 09910436

01 FC:581 40.00 CH

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9. Statement and signature.

*To the best of my knowledge and belief, the foregoing is true and correct and any attached copy is a true of copy of the original document.*Chad R. WalshName of Person Signing
Atty. Reg. No. 43,235

Signature

October 31, 2001

Date

Total number of pages including cover sheet, attachments and document 3Mail documents to be recorded with required cover to:
Commissioner of Patents and Trademarks, Box Assignments
Washington, D.C. 20231

PA 3180285 v1

ASSIGNMENT OF PATENT APPLICATION

SOLE

WHEREAS, Bo Zhang, of 16 Bel Flora, Las Flores, California, 92688; hereinafter referred to as "Assignor," is the inventor of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: SYNCHRONOUS DATA SERIALIZATION CIRCUIT

Date(s) of execution of Declaration: September 28, 2001

Filing Date: July 19, 2001

Application No.: 09/910,436; and

WHEREAS, Broadcom Corporation, a corporation of the state of California, located at 16215 Alton Parkway, Irvine, California, 92619-3616, hereinafter referred to as "ASSIGNEE," is desirous of acquiring an interest in the invention and application and in any U.S. Letters Patent and Registrations which may be granted on the same;

For good and valuable consideration, receipt of which is hereby acknowledged by Assignor, Assignor has assigned, and by these presents does assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on any patent application claiming priority from the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignor had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignor further agrees that Assignor will, without charge to Assignee, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including applications and instruments of transfer, and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignor has signed his/her name on the date indicated.

Dated: 10/1/2001

Bo Zhang
Bo Zhang

WITNESSES:

Dated: 10/01/2001

Jun Cao
Name: Jun Cao

Dated: 10/1/2001

Guangming Yin
Name: Guangming Yin



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

JUNE 28, 2001

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TOWNSEND AND TOWNSEND AND CREW LLP
J. MATTHEW ZIGMANT
TWO EMBARCADERO CENTER, 8TH FLOOR
SAN FRANCISCO, CALIFORNIA 94111-3834



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JM Zigmant.

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RECORDATION DATE: 03/26/2001

REEL/FRAME: 011696/0668
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
SAVOJ, JAFAR

DOC DATE: 03/10/2001

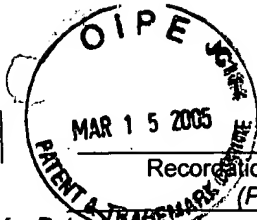
ASSIGNEE:
BROADCOM CORPORATION
16215 ALTON PARKWAY
IRVINE, CALIFORNIA 92619

SERIAL NUMBER: 09782687
PATENT NUMBER:

FILING DATE: 02/12/2001
ISSUE DATE:

TARA WASHINGTON, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

04-24-2001



Attorney Docket No. 019717-001110US

Recordation Form Cover Sheet
(Patents Only)U.S. Department of Commerce
Patent and Trademark Office

101684388

To the Honorable Asst. Commissioner for Patents: Please record the attached original documents or copy thereof

1. Name of conveying party(ies):

Jafar Savojs

Additional name(s) of conveying parties attached? ☐ Yes ☒ No.

2. Name and address of receiving party(ies):

Name: Broadcom Corporation

Internal Address:

Street Address: 16215 Alton Parkway

City: Irvine State: CA ZIP: 92619

Additional names and addresses attached? ☐ Yes ☒ No

3. Nature of conveyance:

- ☒ Assignment ☐ Merger
- ☐ Security Agreement ☐ Change of Name
- ☐ Other:

Execution Date: March 10, 2001

4. Application Number(s) or Patent Numbers.

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No(s): 09/782,687

B. Patent No(s):

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name:

J. Matthew Zigmant
TOWNSEND AND TOWNSEND AND CREW LLP
Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834
(415) 576-0200

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$40.00

☐ Enclosed ☒ Charge Fees to Deposit Account☒ Charge any additional fees associated with this paper or during the pendency of this application, or credit any overpayment, to deposit account.

8. Deposit account number: 20-1430

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9. Statement and signature.

To the best of my knowledge and belief, the foregoing is true and correct and any attached copy is a true copy of the original document.

J. Matthew Zigmant
Name of Person Signing

Signature

March 19, 2001
Date

Atty Reg. No. 44,005 Total number of pages including cover sheet, attachments and document: 210. Change Correspondence Address to that of Part 5? ☐ Yes ☒ No

OMB No. 0651-0011 (exp. 4/94)

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Mail documents to be recorded with required cover to:

Asst. Commissioner for Patents
Box: Assignments
Washington, D.C. 20231

ASSIGNMENT OF PATENT APPLICATION

SOLE

WHEREAS, Jafar Savoj, of 5510 Sepulveda Blvd #128, Sherman Oaks, CA 91411; hereinafter referred to as "Assignor," is the inventor of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: **LINEAR HALF-RATE PHASE DETECTOR AND
CLOCK AND DATA RECOVERY CIRCUIT**

Date(s) of execution of Declaration: 3/10/2001

Filing Date: 02/12/2001

Application No.: Unassigned; and

WHEREAS, Broadcom Corporation, a corporation of the state of California, located at 16215 Alton Parkway, Irvine, CA, 92619, hereinafter referred to as "ASSIGNEE," is desirous of acquiring an interest in the invention and application and in any U.S. Letters Patent and Registrations which may be granted on the same;

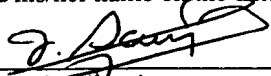
For good and valuable consideration, receipt of which is hereby acknowledged by Assignor, Assignor has assigned, and by these presents does assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on any patent application claiming priority from the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignor had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

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Assignor hereby authorizes and requests Townsend and Townsend and Crew LLP, Two Embarcadero Center, 8th Floor, San Francisco, CA 94111-3834, to insert herein above the application number and filing date of said application when known.

IN TESTIMONY WHEREOF, Assignor has signed his/her name on the date indicated.

Dated: 3/10/2001



Jafar Savoj